

## **5.4 ECOLOGICAL RESOURCES**

### **5.4.1 Alternative 1 – No Action**

Alternative 1 would not affect ecological resources as no FRP changes would be made. No effects to protected species would be expected from implementation of Alternative 1.

### **5.4.2 Alternative 2 – Remodel**

Alternative 2 would not affect ecological resources as previously cleared areas would be used for remodeling laydown areas. No effects to protected species are expected from implementation of Alternative 2.

### **5.4.3 Alternative 3 – Brownfield**

Implementation of Alternative 3 would have little effect on ecological resources because previously cleared areas would be used for remodeling and construction laydown areas. As described in Section 4.3, the proposed construction area would be located at the ORNL and near the floodplain of White Oak Creek. The footprints for the proposed FRP building and parking areas on the Brownfield Site are not expected to impact forest habitat, but border small identified wetlands (Figure 5.4–1). The parking area on the south side of the East Campus would be located near a high-quality forest on Haw Ridge and a stream. If the parking lot were extended past the previously cleared area, it could adversely impact the forest area and stream.

New FRP construction of parking lots under Alternative 3 could encroach on the White Oak Creek floodplain in the industrialized plant area. Protected species would not be present at this construction area because it has been disturbed recently. Within the main ORNL area, White Oak Creek is channelized with little riparian vegetation and limited aquatic insect production. Only minor land disturbance from FRP construction or remodeling would occur within 30 m (100 ft) of any stream. Foraging by gray or Indiana bats is not expected along White Oak Creek. A biological assessment will be prepared to assess potential impacts to the gray and Indiana bats, and appropriate measures would be taken if mitigation is needed. Consultations regarding any potential effect to threatened or endangered species would be completed prior to taking the action.

**FIGURE 5.4–1.—*Potentially Impacted Wetlands in the Bethel Valley Watershed.***

New FRP building construction proposed under Alternative 3 does not occur in the 100-year floodplain.

Wetlands potentially impacted by construction activities are:

- WOM-12 on White Oak Creek immediately downstream of construction for the parking lot on the south side of the Central Campus area (Pounds et al. 1996)
- A small, unnamed wetland area near the proposed construction of the parking lot northwest of the 4500 Building recently identified (Parr 2000) that includes a small pond with cattails and black willows

In-field delineation of the wetland-upland boundary would be necessary to implement mitigation measures such as best management practices that can minimize effects from siltation and drainage.

#### **5.4.4            Alternative 4 – Greenfield**

No sensitive resources, such as wetlands, rare plants, or listed species have been identified within the Greenfield area in the Central Chestnut Ridge report (DOE 1998a). The report concluded that the overall area was suitable for development and non-residential land use. However, no surveys for wetlands, special habitats, or sensitive species were conducted for the report or within the representative Greenfield footprint. A biological assessment will be prepared to assess potential impacts to the gray and Indiana bats, and appropriate measures would be taken if mitigation is needed. If Alternative 4 were selected, appropriate surveys for the presence of rare plants and wetlands would be conducted, and consultations would be completed prior to initiating design and construction activities at the site.